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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)
3562-000033

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On March 15, 2006

Signature

Typed or printed name David L. Suter / Jennifer M. Woodside WojtalaApplication Number
10/696,720Filed
October 28, 2003First Named Inventor
Thomas HathawayArt Unit
1725Examiner
Ing Hour Lin

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

applicant/inventor

assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is
enclosed. (Form PTO/SB/96)

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Registration number if acting under 37 CFR 1.34 _____

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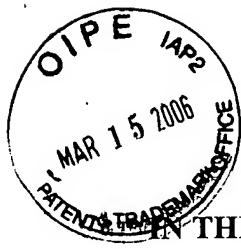
Telephone number

March 15, 2006

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

*Total of _____ forms are submitted.



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/696,720

Filing Date: October 28, 2003

Applicant: HATHAWAY, Thomas

Group Art Unit: 1725

Examiner: LIN, Ing Hour

Title: FOUNDRY CASTING MATERIAL COMPOSITION

Attorney Docket: 3562-000033

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

REASONS FOR REQUEST FOR PRE-APPEAL BRIEF REVIEW

Sir:

In accordance with the Pre-Appeal Brief Request for Review and accompanying Notice of Appeal being filed herewith, Applicant is requesting review of the final rejection of the above identified application. The filing of the Notice of Appeal and the Pre-Appeal Brief Request for Review is within three-months of the mailing of the Final Office Action (and in response to an Advisory Action mailed February 28, 2006).

The Examiner has maintained the rejections of Claims 32-40 and 42-59. Claims 32, 39, and 42-45 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Johnson et al. (U.S. Pat. No. 5,126,089, hereinafter “Johnson”) in view of Madono (U.S. Pat. No. 4,584,328, hereinafter “Madono”). Further, Claims 33-38, 40 and 46-59 stand rejected under 35 U.S.C. § 103(a) as being

unpatentable over Johnson in view of Madono and further in view of Hoffman Jr. et al. (U.S. Pat. No. 6,264,823 hereinafter “Hoffman”).

Applicant respectfully submits that the rejections of record are factually and legally deficient, and do not establish a *prima facie* case of obviousness. *See e.g.*, Official Gazette Notice July 12, 2005. Thus, Applicant requests a pre-appeal brief review of the merits of the rejections, as set forth in the Final Rejection. Arguments of record are referred to by Paper Title, Date, and Page No.

In particular, a *prima facie* case of obviousness has not been established because of each of the following reasons: (1) even if combined, the cited art fails to disclose each and every element of the claimed invention; (2) the rejections fail to elucidate any motivation to combine the cited art so as to arrive at the presently claimed invention; and (3) the rejections fail to explain how or why one of skill in the art would have a reasonable expectation of success from combining the cited references, even if motivated to do so.¹ (*See e.g.*, MPEP §2143; *In re Vaeck*, 20 USPQ.2d 1438 (Fed. Cir. 1991)). Applicant respectfully submits that none of the Johnson, Madono, and/or Hoffman references provides the necessary disclosure, suggestion, or motivation to render the invention in Claims 32-40 and 42-59 obvious, as set forth in more detail below.

1. Each And Every Limitation of the Claimed Invention Is Not Disclosed In the Cited Art

The claims recite methods of forming metal parts (Claims 32-40, 42-45) and methods of removing residual casting material from a metal part (Claims 46-59). The cited art fails to disclose or even suggest such methods, in particular, by failing to disclose the limitation of removing residual casting material from a surface of a cast metal part *via electrolytic processing*.²

Claims 32, 39, and 42-45 stand rejected over Johnson in view of Madono. These claims commonly recite “removing said residual mold material from said surface via electrolytic processing

¹ See Response to Office Action Under 37 C.F.R. §116, 2/15/2006, Pp. 11-14.

² Response to Office Action Under 37 C.F.R. §116, 2/15/2006, Pp. 11-14; Response to Office Action, 9/29/2005, Pp. 18-20.

by applying a voltage and contacting said material with an electrolyte". Neither Johnson nor Madono have any disclosure or suggestion of electrolytic processing.³ Lacking any reference to this key claim element in either reference, a finding *prima facie* obviousness is factually unsupported, and the rejection is legally improper.

Further, Claims 32 and 46 recite a disintegration additive that consists essentially of an ionic compound, which excludes disintegration additives that comprise other materials, such as plastic. Madono only discloses a plastic-encapsulated additive and Johnson and Hoffman have no disclosure whatsoever of additives for casting materials.⁴ Applicant submits that the import of the consisting essentially of language in these claims has not been considered in maintaining this rejection.

2. The Cited References Lack Any Suggestion or Motivation to Combine the References so as to Arrive At the Claimed Invention

No plausible suggestion or motivation to arrive at the claimed invention in view of the cited references has been offered.⁵ None of the cited references suggests or provides motivation to use electrolytic processing to remove residual casting materials.

In particular, neither Johnson nor Madono disclose have any applicability to electrolytic processing.⁶ Not only is there no motivation to combine these references, it is inherently impossible to arrive at Applicant's invention of Claims 32, 39, and 42-45 even if they were to be combined. With respect to Claims 33-38, 40 and 46-59, Hoffman does disclose electrolytic methods, but in the context of conventional electrolytic parts-washers to remove thin films, such as rust, dirt, scale, smut, oil, and the like. Hoffman is entirely silent as to residual casting materials and lacks any suggestion or motivation to use an electrolytic parts-washer to remove anything other than thin films.⁷ The rejection provides no rationale for why one of ordinary skill in the art would be motivated to combine two

³ Response to Office Action Under 37 C.F.R. § 116, 2/15/2006, Pp. 12-13; Response to Office Action, 9/29/2005, Pp. 16-18.

⁴ Response to Office Action, 9/25/2005, Pp. 15-20.

⁵ Response to Office Action Under 37 C.F.R. §116, 2/15/2006, Pp. 12-14; Response to Office Action, 9/29/2005, Pp. 15-21.

⁶ Id.

⁷ Id.

references (Johnson or Modono) that do not relate to electrolytic cleaning, with a reference that does not envision cleaning of casting materials, to arrive at a method which employs a disintegration additive. Further, Madono teaches away from combination with Johnson and Hoffman.⁸ Lacking a motivation to combine the references of record, a finding *prima facie* obviousness is factually unsupported, and the rejection is legally improper.

3. One of Skill In the Art Would Have No Reasonable Expectation of Success Regarding a Combination of References.

The proposed combination of references provides no reasonable expectation of success regarding the required modifications.⁹ The only cited reference that discloses electrolytic processing is Hoffman. Nowhere does Hoffman suggest that electrolytic processing can remove residual casting material from a cast part. There is a vast physical distinction between a thin film coating suggested as being suitable for removal by Hoffman, and a ceramic-like casting material. In fact, to those of ordinary skill in the art, the electrolytic parts cleaner of Hoffman would likely appear to be ineffective at removing traditional casting materials, as it only removes accumulated and lightly-adhered films.¹⁰

Further, while the Madono reference generally suggests providing a plastic encapsulated additive in a casting material that potentially volatilizes during casting, the selection of such a plastic encapsulated additive would contravene the rationale for including a disintegration additive that promotes disintegration when exposed to an electrolyte and applied voltage.¹¹ There is no reasonable expectation of success that the combination of references could arrive at the presently claimed invention. Lacking a reasonable expectation for success from combining these references (assuming there was motivation to make a combination to begin with) a finding *prima facie* obviousness is factually unsupported, and the rejection is legally improper.

⁸ Response to Office Action, 9/29/2005, Pp. 16-17, Amendment After Final, 3/28/2005, Pp. 18-19; Response, 11/10/04, Pp. 2-4.

⁹ Response to Office Action Under 37 C.F.R. §116, 2/15/2006, Pp. 13-14; Response to Office Action, 9/29/2005, Pp. 17-20.

¹⁰ Response to Office Action Under 37 C.F.R. § 116, 2/15/2006, Pg. 13-14; Response to Office Action, 9/29/2005, Pp. 19-20; Amendment After Final, 3/28/2005, Pp. 18-19.

¹¹ Response to Office Action, 9/29/2005, Pp. 15-18.

For all of these reasons, Applicant submits that a *prima facie* case of obviousness has not been established or supported and that review via the pre-appeal brief program is appropriate.

Respectfully submitted,

Dated: March 15, 2006

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